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## ORIGINAL ARTICLES.

### TYPHOID FEVER IN COUNTRY DISTRICTS.

BEING THE SUBJECT FOR GENERAL DISCUSSION AT THE NINETY-SEVENTH ANNUAL  
SESSION OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE  
STATE OF MARYLAND.

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THE dwellers in cities have a very deep concern in the prevalence of typhoid fever in country towns and districts. In the first place we treat in the city many cases which originate in the country, cases which too often go to swell our mortality bills. During the past six years I have had under my care in the public or private wards of the Johns Hopkins Hospital 89 patients who have come from outside the city limits. The figures are as follows, from a total of nearly 400 : Patients from Baltimore County, 58 ; from Maryland outside Baltimore County, 14 ; from outside Maryland, 17.

Secondly, we take our holidays in the country at the latter half of the summer and in the autumn, the very seasons when typhoid fever is most prevalent. Since we have no means of knowing the number of cases which occur annually in the city, we have of course no way of ascertaining how many have been the unfortunates who, in seeking health in country resorts and seaside places, have found serious illness and not infrequently death. General impressions are not of much value, but I think there are many doctors in practice in this town who could give some specific figures as to the number of persons who have returned to town with the disease, or who

have been attacked while in the country. Cases of the kind have not infrequently come under my observation during the past five or six years, and I know of instances in which many members of a family have been infected during their residence in country places.

Thirdly, our water supply is derived from streams which pass through fairly populous districts in which every autumn typhoid fever prevails.

And lastly, the country sends daily for our consumption an enormous quantity of a food material ; namely, milk, which is especially liable under suitable circumstances to infection with typhoid germs.

The following questions may be profitably discussed by this meeting : First, the prevalence of typhoid fever in country districts. We naturally turn for the statistics to the Report of the State Board of Health. So far as I can read in the last published report of this body for the years 1892-93 the references to typhoid fever are very scanty, and no statements are to be found from which one may glean any information about the incidence of the disease in the counties and towns of the State. I would like very much to ask the Chairman and the Secretary of the Board the reasons for this omission. The matter is of ex-

treme importance and directly concerns the health of the citizens. I suppose the absence of all facts relating to the subject is due to an imperfect organization of the Board.

While the notification of cases of typhoid fever is not compulsory there must be great difficulty in getting accurate figures as to the prevalence of the disease. We are not a whit better off in the city. There were 257 deaths (I include the typho-malarial fevers) last year (1894), but who can tell us how many cases? Shall we put the mortality at 10 per cent. and say 2570, or at 15 per cent. and say 3855 cases? We may take no small shame upon ourselves as a profession that such a state exists. It is useless to scold Dr. McShane or to abuse the members of the State Board of Health. Such a condition at this end of the century is a disgrace to us as a profession, and to us individually. The Report of the State Board to which I referred indicates weakness, inherited or acquired, of a most disastrous quality, and if any member of this ancient and honorable Faculty can read the same without a blush I am sorry for his intellectual medulla.

The notification of every case of typhoid fever in the city and throughout the State should be enforced at the earliest possible date. We could then ascertain the percentage of cases which really originate within the city limits, and by a proper system of co-operation of the County and State Boards every local outbreak could be studied and precautionary measures taken.

A second point which can be discussed with advantage relates to conditions in the smaller towns and country places favoring the development and spread of typhoid fever. Outbreaks of typhoid fever in a town like Cumberland, in which the people had been drinking water contaminated by the sewage of from  $\frac{1}{3}$  to  $\frac{1}{4}$  of the population, are of course not remarkable. But such outbreaks are not nearly so dangerous to us in the city as the smaller house-epidemics in country places, which are by no means uncommon. In many of these it is extremely difficult to trace the in-

fection, as the remarkable one which I put on record a few years ago. In a farm house in Harford County, in which during the months of August, September, October and November there were ten cases with four deaths; nine of these followed the arrival of a member of the family from Ocean City, with what was thought to be malaria, but which turned out to be severe typhoid. The water supply in this instance was certainly not contaminated, since it was used in common with another large family consisting of many persons at the susceptible age. Here the food supply might have become in some way infected though Dr. Sappington, who had charge of the cases, seemed to think that it was most probably transmitted by direct contagion.

A State board of health of any efficiency would receive early notification of every house outbreak, and with a proper corps of inspectors, suitable means could be taken to prevent, at any rate, diffusion of the poison. How interesting it would be to know just how many cases of the disease occurred last autumn along the watershed of the Gunpowder and Jones' Falls, both of which streams are liable to pollution. We can never be free from danger on this score until the city has complete control of the streams.

The third point for discussion, and in reality the most important one, relates to the possible contamination of the milk supply of this city. How many cases of typhoid fever occur in the families of those who in this State supply milk to the citizens of this town. Can Dr. McShane answer, or can any member of the State Board of Health answer, or if they cannot, can they tell us how to obtain the facts at our next typhoid season so that an answer could be given? The dairy industry, as we all know, is enormous, and one of the greatest imports in the health of the city. The readiness with which typhoid fever is transmitted by milk has been amply demonstrated; nor does it require that a man ill himself with typhoid fever should milk cows or be in contact with the milk. A man whose boy is ill with

the disease, or the woman who has been nursing her daughter, may readily, in several ways, carry the infection.

As a medium for the development of the typhoid bacilli milk is well known to be most favorable. It is probably not alone from the water of a contaminated well used for washing the milk cans that infection arises, but in many instances from the direct contact of dirty hands with the milk or with the vessels in which it is placed. The only possible safeguard is in a rigid system of inspection of every dairy which supplies milk to the city, an inspection which should be frequent, systematic and thorough.

I have no desire to take up the time of the Faculty with figures from other localities. There are those which show, as in New York State, that while typhoid is progressively decreasing in our large cities, it is progressively increasing in the country districts. Baltimore, with a mortality from this preventable of between 5 and 6 per 10,000 of popu-

lation, ranks with the unsewered towns, the sanitary conditions of which are still antique. We shall probably never reduce the death rate from this disease to the ratio of modern cities until the cesspool system is completely abolished. But before that great work is undertaken, the citizens should demand that at any rate the sources of contamination from outside should be reduced to a minimum; that our sources of water supply should be scrupulously guarded; and that our citizens should be guarded against all possibility of infection through the milk.

The points, I think, which could be discussed with advantage this evening are:

1. The actual prevalence of typhoid fever in the country districts and small towns throughout this State.
  2. The measures which should be adopted to prevent contamination of our water supply.
  3. The question of the inspection of dairy farms.
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